IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of	**MAIL STOP**
Alexandre Benoit et al.	Group Art Unit: 2437
Application No.: 10/553,348	Examiner: Courtney D. Fields
Filed: June 14, 2006	Confirmation No.: 2095
For: METHOD FOR MANAGING AN EXECUTABLE CODE DOWNLOADED IN A REPROGRAMMABLE ON-BOARD SYSTEM	

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Commissioner for Patents
P.O. Box 1450
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Sir:

Applicants request review of the final rejection of claims 1-6 set forth in the Office Action dated April 29, 2009. This Request is being filed with a Notice of Appeal. No amendments are being filed with the Request.

Background

The claimed subject matter is directed to a secure procedure for downloading and verifying executable code on a microprocessor card. The steps of the claimed method can be readily understood with reference to the three figures of the application. The executable code that is intended to be run on the microprocessor card, designated CI', is derived from original executable code CI, and modified for a specific use. Prior to downloading code onto the card, an operation is performed off-card, as depicted in Figure 1. A software component CL is calculated, based on differences between the original executable code CI and the modified executable code CI'. This software component enables the modified code CI' to be

reconstructed from the original code CI. The original executable code CI and the software component CL are signed, to enable their authenticity to be verified.

Thereafter, as depicted in Figure 2, the signed original code CI and the signed software component CL are loaded onto the card. Then, in an operation which takes place on the card, the signatures of the original code and the software component are verified. Upon verification, the software component CL that was loaded onto the card is applied to the original code CI that was also loaded onto the card, to reconstruct the modified code CI', on the card (Figure 3). This modified code can then be executed by the card's microprocessor.

Argument

Claims 1-6 stand rejected under 35 U.S.C. §102, as being anticipated by the *Vetillard* Publication (U.S. 2005/0107069). As set forth in MPEP § 2131, "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." The final Office Action fails to provide a factual showing that meets this requirement. In setting forth the rejection, the Office Action cites to certain passages within the reference. However, the relationship of these passages to the language of the claims is not self-evident. Nor does the Office Action provide any explanation of the manner in which these passages are being interpreted to disclose, either expressly or inherently, the elements recited in the claims. As such, it does not state a proper case for consideration by the Board of Appeals.

For the sake of brevity, this Request will focus upon the subject matter of independent claim 1. First, the claim recites three distinct elements of code, namely (i) original executable code, (ii) modified executable code corresponding to the

original code, and (iii) a software component which, when it is applied to the original code, makes it possible to reconstruct the modified code. The statement of rejection (Office Action at pages 3-4) refers to the *Vetillard* publication at paragraphs [0058] - [0064] and [0073] - [0074]. These paragraphs describe the loading of code onto a representative of an authority, which can be a smart card. Presumably, the Office Action is interpreting this code to be one of the two forms of executable code (either original or modified) that is recited in claim 1. However, the Office Action does not identify any disclosed elements of code that are being interpreted to constitute the other of the two claimed forms of executable code (modified or original), or the software component that is used to transform the original code into the modified code. At best, therefore, the Office Action only contains a showing sufficient to establish that the *Vetillard* publication discloses one of the elements of code that are recited in the claim, but not all three.

Second, claim 1 recites certain operations that are performed off-card, i.e., before any code is loaded onto the card, and other operations that are performed on-card, after certain elements of code have been loaded. Even if the *Vetillard* publication could somehow be interpreted to disclose the three elements of code that are discussed previously, there is no showing that the specific operations respectively performed off-card and on-card with those code elements are carried out in the same manner as recited in the claim.

For example, claim 1 recites that, after identifying modified executable code that corresponds to the original executable code, the following step is performed off-card; "from variations between the data of the original code and the corresponding modified code, calculating a software component which, when it is applied to the

original code, makes it possible to reconstruct the modified code". In rejecting claim 1, the Office Action refers to paragraphs [0058] and [0059] of the *Vetillard* publication in connection with this claimed step. These two paragraphs describe the secure exchange of messages between a server and a client, using a representative of a verification authority. The Office Action does not explain how they can be interpreted to disclose the calculation of a software component that can be applied to original code to reconstruct pre-existing modified code.

Claim 1 recites that, once the signed original code and the signed software component are downloaded to the card and verified, the following operation is performed on-card; "applying the software component to the original code *so as to reconstruct the modified code* for its execution by the microprocessor." In connection with this claimed feature, the statement of rejection refers to paragraphs [0073] and [0074] of the *Vetillard* publication. These paragraphs discuss the verification of electronic signatures. It is not at all apparent, however, how they are being interpreted to disclose the application of a software component to original executable code in order to reconstruct previously identified modified code. Nor does the Office Action provide any explanation of such an interpretation.

In responding to Applicants' prior arguments, paragraph 2 of the Office Action (pages 2-3) discusses paragraphs [0055] - [0057], [0070] and [0073]. In doing so, however, the Office Action does not relate the subject matter disclosed in these paragraphs to the elements of claim 1. Nowhere in this discussion does the Office Action refer to the claim language, or otherwise attempt to identify what subject matter disclosed in these paragraphs, or any other portion of the reference, corresponds to the claimed modified executable code or the claimed software

component. Nor does the Office Action address the distinction between the claimed operations that are carried out off-card, and those that are performed on-card.

Conclusion

The final Office Action does not provide the factual showing that is necessary to support a rejection based upon anticipation. In particular, it does not establish that "each and every element as set forth in the claim is found…in [the] prior art reference." There is no nexus drawn between the passages of the reference that are identified and/or discussed in the Office Action, and the language of the claims. Consequently, one is left to conjecture as to how the reference is being interpreted to meet the recitations of the rejected claims.

As such, there is an insufficient record to be presented to the Board of Patent Appeals and Interferences. They should not be required to guess how the reference is being interpreted to disclose each of the three claimed software elements, or the respective off-card and on-card operations that are being performed with respect to those software elements. Withdrawal of the final Office Action is respectfully submitted to be in order.

Respectfully submitted,

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